

1. A method for use in analyzing software behavior, comprising:
in a disk drive controller having a processor executing computer software stored
in a memory communicating with the processor via a local bus, identifying computer
executable program code that includes a set of computer executable program instructions
5 for recording analytical data for at least a subset of the computer executable program
code, the set of computer executable program instructions being disabled from executing;
and

without halting execution of the computer executable program code, enabling
execution of the set of computer executable program instructions.

10 2. The method of claim 1, further comprising
identifying an instruction in the computer executable program code that disables
the set of computer executable program instructions from executing; and
causing a change to the computer executable program code to counter the effect
of the instruction.

15 3. The method of claim 2, further comprising
removing the instruction from the computer executable program code.

4. The method of claim 1, wherein the computer executable program code is
arranged to cause execution of the computer executable program code to bypass the set of
computer executable program instructions.

20 5. The method of claim 1, further comprising
identifying a second set of computer executable program instructions wherein the
second set of computer executable program instructions is for recording analytical data
for a second set of the computer executable program code, the second set including all or

a portion of the computer executable program code, the second set of computer executable program instructions being disabled from executing; and

causing execution of one of the sets of computer executable program instructions to be enabled concurrently with execution of the other of the sets of computer executable program instructions being disabled.

6. The method of claim 5, wherein one of the sets of computer executable program instructions records analytical data for a parent function of a child function for which the other of the sets of computer executable program instructions records analytical data.

7. The method of claim 1, further comprising accepting an address range for the at least a subset of the computer executable program code.

8. The method of claim 1, wherein the set of computer executable program instructions is arranged to record analytical data indicating a start time for an instance of execution of the at least a subset of the computer executable program code.

9. The method of claim 1, wherein the set of computer executable program instructions is arranged to record analytical data indicating an end time for an instance of execution of the at least a subset of the computer executable program code.

10. The method of claim 1, wherein the set of computer executable program instructions is arranged to calculate derivative analytical data during execution of the at least a subset of the computer executable program code.

11. The method of claim 1, further comprising

receiving a request to enable execution of the set of computer executable program instructions.

12. The method of claim 1, wherein the set of computer executable program instructions is arranged to interact with a data structure having an entry time field.

5 13. The method of claim 1, wherein the set of computer executable program instructions is arranged to interact with a data structure having a return address field.

14. The method of claim 1, wherein the set of computer executable program instructions is arranged to interact with a data structure having a re-entry time field.

10 15. The method of claim 1, wherein the set of computer executable program instructions is arranged to interact with a data structure having a self time field.

16. The method of claim 1, wherein the set of computer executable program instructions is arranged to interact with a data structure having a number of calls field.

17. The method of claim 1, wherein the set of computer executable program instructions is arranged to interact with a data structure having a function address field.

15 18. A method for use in analyzing software behavior, comprising:
in a disk drive controller having a processor executing computer software stored in a memory communicating with the processor via a local bus, identifying analytical software for recording analytical data of software execution, and identifying software source code that does not include the analytical software;

20 deriving computer executable program code from the software source code and the analytical software, the computer executable program code including computer executable instructions for recording analytical data for at least a subset of the computer

executable program code, the computer executable instructions being inactive and being capable of being activated during execution of the computer executable program code.

19. The method of claim 18, wherein the computer executable program code is arranged to cause execution of the computer executable program code to bypass the computer executable instructions for recording analytical data for at least a subset of the computer executable program code.

20. Apparatus for use in analyzing software behavior, comprising:

means for, in a disk drive controller having a processor executing computer software stored in a memory communicating with the processor via a local bus, identifying computer executable program code that includes a set of computer executable program instructions for recording analytical data for at least a subset of the computer executable program code, the set of computer executable program instructions being disabled from executing; and

means for, without halting execution of the computer executable program code, enabling execution of the set of computer executable program instructions.

21. Apparatus for use in analyzing software behavior, comprising:

means for, in a disk drive controller having a processor executing computer software stored in a memory communicating with the processor via a local bus, identifying analytical software for recording analytical data of software execution, and identifying software source code that does not include the analytical software;

means for deriving computer executable program code from the software source code and the analytical software, the computer executable program code including computer executable instructions for recording analytical data for at least a subset of the

computer executable program code, the computer executable instructions being inactive and being capable of being activated during execution of the computer executable program code.

22. A system for use in analyzing software behavior, comprising:

5 in a disk drive controller having a processor executing computer software stored in a memory communicating with the processor via a local bus, an identifier identifying computer executable program code that includes a set of computer executable program instructions for recording analytical data for at least a subset of the computer executable program code, the set of computer executable program instructions being disabled from
10 executing; and

an enabler enabling, without halting execution of the computer executable program code, execution of the set of computer executable program instructions.

23. A system for use in analyzing software behavior, comprising:

15 in a disk drive controller having a processor executing computer software stored in a memory communicating with the processor via a local bus, an identifier identifying analytical software for recording analytical data of software execution, and identifying software source code that does not include the analytical software;

a deriver deriving computer executable program code from the software source code and the analytical software, the computer executable program code including
20 computer executable instructions for recording analytical data for at least a subset of the computer executable program code, the computer executable instructions being inactive and being capable of being activated during execution of the computer executable program code.

24. Computer software, residing on a computer-readable storage medium, comprising a set of instructions for use in a computer system to help cause the computer system to analyze software behavior, the set of instructions causing the computer system to:

5 in a disk drive controller having a processor executing computer software stored in a memory communicating with the processor via a local bus, identify computer executable program code that includes a set of computer executable program instructions for recording analytical data for at least a subset of the computer executable program code, the set of computer executable program instructions being disabled from executing; and

10 without halting execution of the computer executable program code, enable execution of the set of computer executable program instructions.

25. Computer software, residing on a computer-readable storage medium, comprising a set of instructions for use in a computer system to help cause the computer system to analyze software behavior, the set of instructions causing the computer system to:

15 in a disk drive controller having a processor executing computer software stored in a memory communicating with the processor via a local bus, identify analytical software for recording analytical data of software execution, and identify software source code that does not include the analytical software;

20 derive computer executable program code from the software source code and the analytical software, the computer executable program code including computer executable instructions for recording analytical data for at least a subset of the computer

executable program code, the computer executable instructions being inactive and being capable of being activated during execution of the computer executable program code.

26. A method for use in analyzing software behavior, comprising:

in a disk drive controller having a processor executing computer software stored

5 in a memory communicating with the processor via a local bus, identifying computer executable program code that includes at least one computer executable program instruction causing execution of analytical program instructions to be avoided, the analytical program instructions causing recording of analytical data for at least a subset of the computer executable program code; and

10 without halting execution of the computer executable program code, performing a change directed to the at least one computer executable program instruction to allow execution of the analytical program instructions.

27. The method of claim 26, further comprising performing the change in response to user input.

15 28. The method of claim 26, wherein the at least one computer executable program instruction is included in a function header of the computer executable program code.

29. The method of claim 26, wherein the at least one computer executable program instruction includes a branch instruction.

20 30. The method of claim 26, further comprising removing the at least one computer executable program instruction; and inserting at least one new program instruction that specifies a call to the analytical program instructions.

31. Apparatus for use in analyzing software behavior, comprising:

means for, in a disk drive controller having a processor executing computer

software stored in a memory communicating with the processor via a local bus,

identifying computer executable program code that includes at least one computer

5 executable program instruction causing execution of analytical program instructions to be

avoided, the analytical program instructions causing recording of analytical data for at

least a subset of the computer executable program code; and

means for, without halting execution of the computer executable program code,

performing a change directed to the at least one computer executable program instruction

10 to allow execution of the analytical program instructions.

32. A system for use in analyzing software behavior, comprising:

an identifier identifying, in a disk drive controller having a processor executing

computer software stored in a memory communicating with the processor via a local bus,

computer executable program code that includes at least one computer executable

15 program instruction causing execution of analytical program instructions to be avoided,

the analytical program instructions causing recording of analytical data for at least a

subset of the computer executable program code; and

a performer performing, without halting execution of the computer executable

program code, a change directed to the at least one computer executable program

20 instruction to allow execution of the analytical program instructions.

33. Computer software, residing on a computer-readable storage medium,

comprising a set of instructions for use in a computer system to help cause the computer

system to analyze software behavior, the set of instructions causing the computer system to:

identify, in a disk drive controller having a processor executing computer software stored in a memory communicating with the processor via a local bus, computer executable program code that includes at least one computer executable program instruction causing execution of analytical program instructions to be avoided, the analytical program instructions causing recording of analytical data for at least a subset of the computer executable program code; and

perform, without halting execution of the computer executable program code, a change directed to the at least one computer executable program instruction to allow execution of the analytical program instructions.